IN THE CLAIMS

Please amend the claims as follows:

1-10.   (Cancelled)

11.   (New) A method of dynamically allocating memory of a computer system operable when a program running on the computer system requests allocation of a requested memory block from a memory pool comprising steps of:

testing a size of the requested memory block to determine if the size is representable as N times two raised to the power M times a cache line size of the computer system, where N is an integer equal to or greater than 1, and M is an integer greater than one; and, if the size of the requested memory block is so representable, further comprising:

determining a spacer size determined as a random spacer size within a predetermined range of allowable spacer size,

reserving a spacer block of memory from the memory pool, the spacer block being of the spacer size; and

allocating the memory block, adjacent to the spacer block, from the memory pool.

12.   (New) The method of claim 11, wherein the integer M is parameterized such that it may be adjusted to optimize performance.

13.   (New) The method of claim 12 wherein the range of permissible spacer sizes is adjustable by a system administrator.